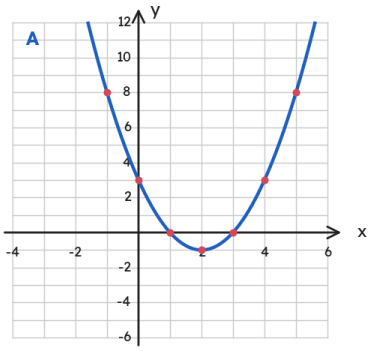
Name: _____ Date: _____

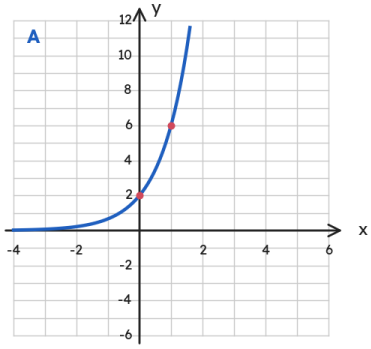
Comparing Linear Functions - Medium

Function A is graphed. Compare it with function B: which has the greater y-intercept, and which has the greater average rate of change on the given interval?

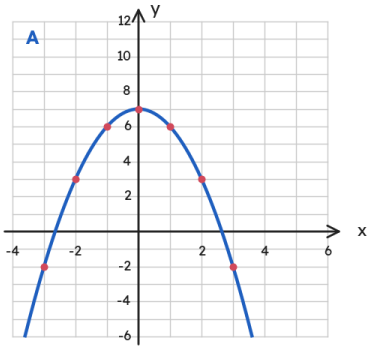
1. Function B: x: 0, 1, 2, 3 y: 0, -1, -2, -3. Interval: x = 0 to x = 1.



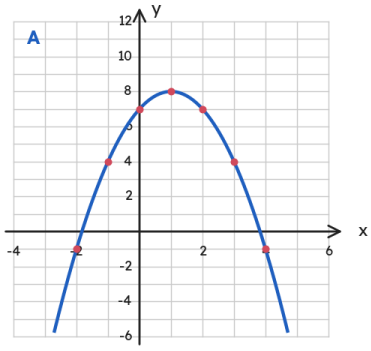
2. Function B: $y = -(x - 2)^2 + 8$. Interval: x = 0 to x = 1.



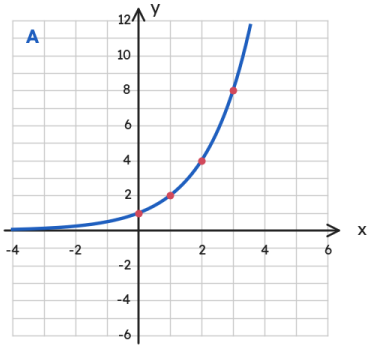
3. Function B: $y = 2x + 4$. Interval: x = 0 to x = 2.



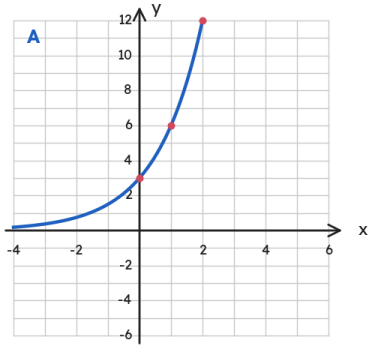
4. Function B: x: 0, 1, 2, 3 y: 4, 5, 6, 7. Interval: x = 1 to x = 3.



5. Function B: x: 0, 1, 2, 3 y: 2, 4, 8, 16. Interval: x = 1 to x = 3.



6. Function B: y = 3^x. Interval: x = 0 to x = 1.

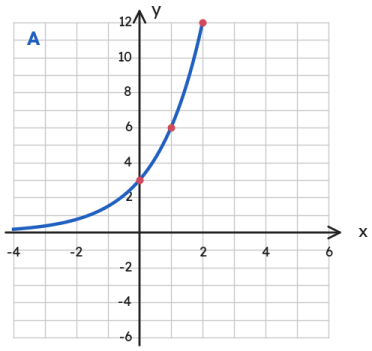


Name: _____ Date: _____

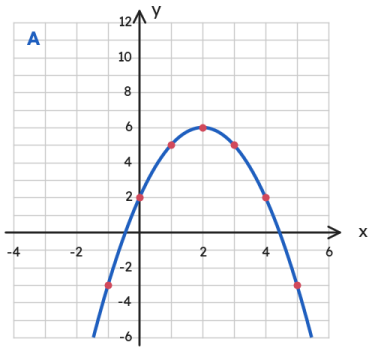
Comparing Linear Functions - Medium

Function A is graphed. Compare it with function B: which has the greater y-intercept, and which has the greater average rate of change on the given interval?

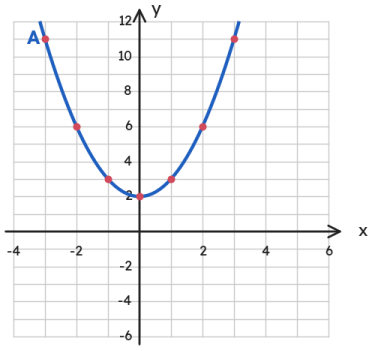
7. Function B: $y = -(x - 3)^2 + 7$. Interval: $x = 0$ to $x = 1$.



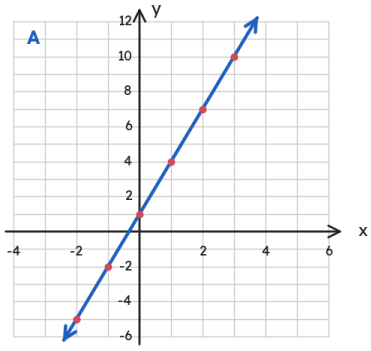
8. Function B: x: 0, 1, 2, 3 y: 6, 1, -2, -3. Interval: $x = 0$ to $x = 1$.



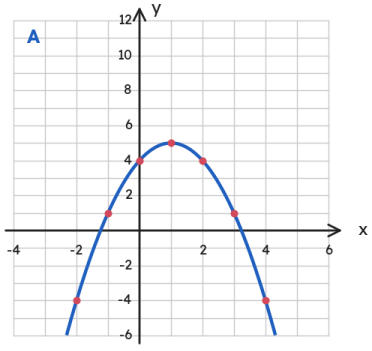
9. Function B: $y = 3(3)^x$. Interval: $x = 0$ to $x = 2$.



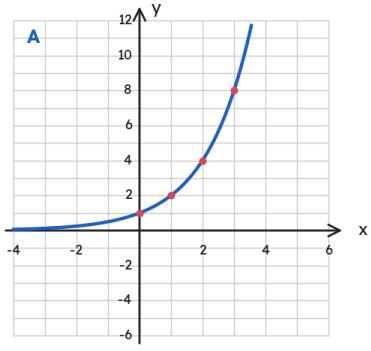
10. Function B: x: 0, 1, 2, 3 y: 13, 8, 5, 4. Interval: $x = 0$ to $x = 2$.



11. Function B: $y = -(x - 3)^2 + 6$. Interval: $x = 0$ to $x = 2$.

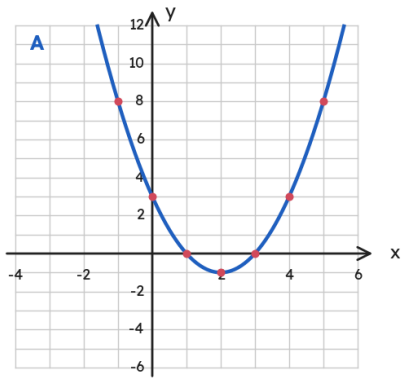


12. Function B: x: 0, 1, 2, 3 y: -2, -1, 2, 7. Interval: $x = 1$ to $x = 3$.



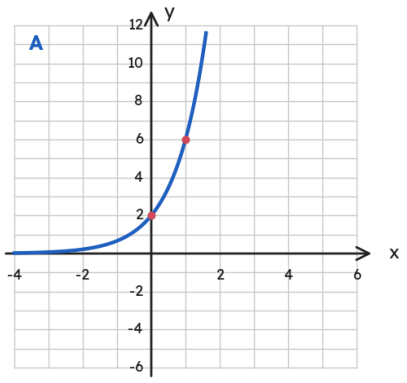
Comparing Linear Functions - Medium - Answer Key

1. Function B: x: 0, 1, 2, 3 y: 0, -1, -2, -3. Interval: x = 0 to x = 1.



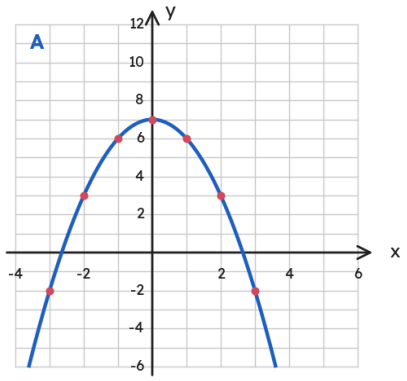
y-intercept: A (3 > 0); rate of change: B (-1 > -3)

2. Function B: $y = -(x - 2)^2 + 8$. Interval: x = 0 to x = 1.



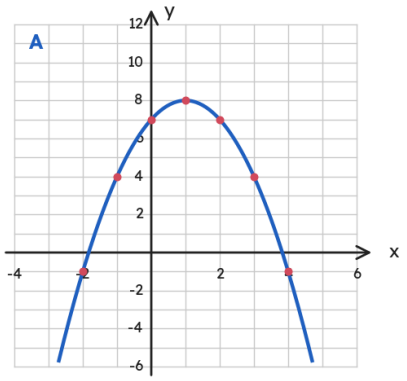
y-intercept: B (4 > 2); rate of change: A (4 > 3)

3. Function B: y = 2x + 4. Interval: x = 0 to x = 2.



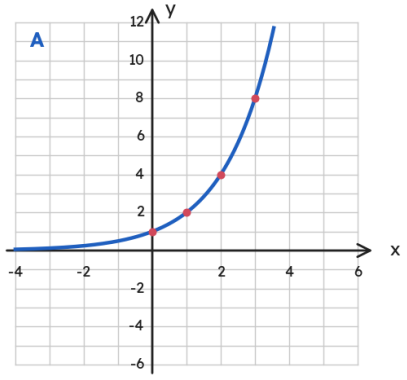
y-intercept: A (7 > 4); rate of change: B (2 > -2)

4. Function B: x: 0, 1, 2, 3 y: 4, 5, 6, 7. Interval: x = 1 to x = 3.



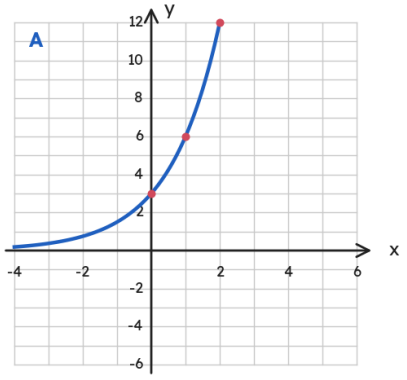
y-intercept: A (7 > 4); rate of change: B (1 > -2)

5. Function B: x: 0, 1, 2, 3 y: 2, 4, 8, 16. Interval: x = 1 to x = 3.



y-intercept: B (2 > 1); rate of change: B (6 > 3)

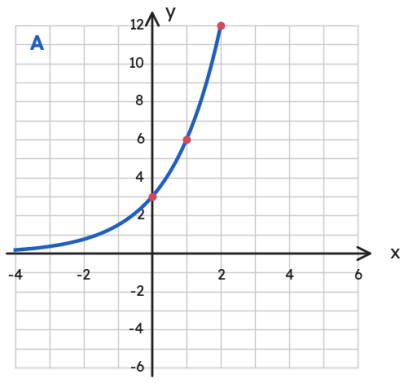
6. Function B: y = 3^x. Interval: x = 0 to x = 1.



y-intercept: A (3 > 1); rate of change: A (3 > 2)

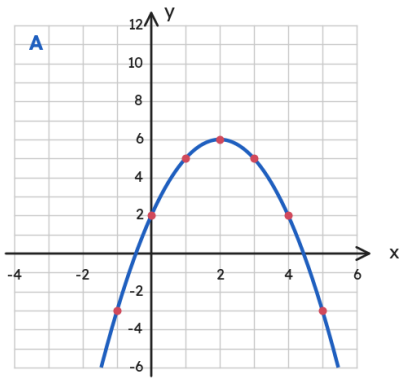
Comparing Linear Functions - Medium - Answer Key

7. Function B: $y = -(x - 3)^2 + 7$. Interval: $x = 0$ to $x = 1$.



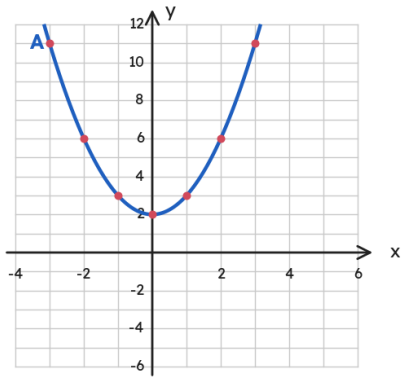
y-intercept: A (3 > -2); rate of change: B (5 > 3)

8. Function B: x: 0, 1, 2, 3 y: 6, 1, -2, -3. Interval: $x = 0$ to $x = 1$.



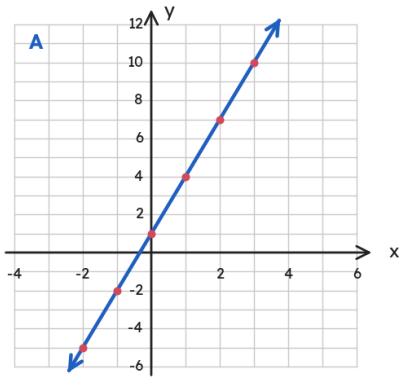
y-intercept: B (6 > 2); rate of change: A (3 > -5)

9. Function B: $y = 3(3)^x$. Interval: $x = 0$ to $x = 2$.



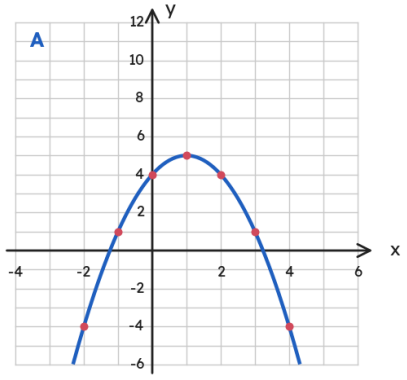
y-intercept: B (3 > 2); rate of change: B (12 > 2)

10. Function B: x: 0, 1, 2, 3 y: 13, 8, 5, 4. Interval: $x = 0$ to $x = 2$.



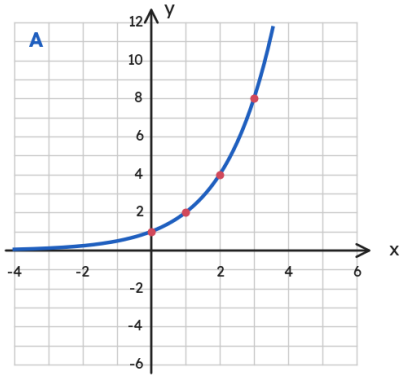
y-intercept: B (13 > 1); rate of change: A (3 > -4)

11. Function B: $y = -(x - 3)^2 + 6$. Interval: $x = 0$ to $x = 2$.



y-intercept: A (4 > -3); rate of change: B (4 > 0)

12. Function B: x: 0, 1, 2, 3 y: -2, -1, 2, 7. Interval: $x = 1$ to $x = 3$.



y-intercept: A (1 > -2); rate of change: B (4 > 3)